

National Oceanic and Atmospheric Administration
NOAA Consolidated Information Technology (IT) Infrastructure
006-03-02-00-01-0511-00
Operational Analysis
October 2007 – September 2008

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Mission Statement
National Oceanic and Atmospheric Administration:

To understand and predict changes in Earth's environment and conserve and manage coastal and marine resources to meet our Nation's economic, social, and environmental needs

Mission Statement
NOAA Office of the Chief Information Officer:

*Develop and maintain an Information Technology Enterprise that does the following:
fully supports the life cycle NOAA's programs; is secure, reliable and cost-effective;
encourages information sharing and complies with all applicable policies*

Executive Summary

This document provides an annual analysis of the operation of the NOAA Consolidated Information Technology Infrastructure Program (NOAA CITIP) which provides the following common program support services to the NOAA direct mission program:

1. Desktop (Seat Management);
2. IT Help Desk;
3. Data Center;
4. Telecommunications - Voice Networks; and,
5. Telecommunications - Data Networks.

Such program support services are necessary for the execution of any modern government direct mission program. Recognizing this, the Office of Budget and Management added to the Federal Enterprise Architecture Framework the IT Infrastructure Optimization Initiative Line of Business to provide an interoperable IT infrastructure that enables intra and inter-agency collaboration. Consistent with this Executive Branch-wide approach, the Department of Commerce and NOAA are pursuing a strategy of incrementally consolidating program support services into corporate programs managed at the enterprise level.

During fiscal year 2007, the NOAA Office of the Chief Information Officer (N-OCIO) continued to provide secure, reliable, and effective IT infrastructure services to NOAA's direct mission programs while advancing the President's strategy for providing even more secure, effective, and cost-efficient program support services. Examples of FY2007 achievements include:

Security -

- Accredited 100% of NOAA's major IT systems by 9/30/07 with full Authorization to Operate
- Acquired and implemented platforms, infrastructure, and security to support Cyber Security Assessment and Management (CSAM) for DOC

Network Operations (Data) -

- 99.7% availability of Washington DC Metropolitan Area Network
- Reduced number of electronic mail servers from 25 to 17
- Established 100% mirroring of SSMC web content

Network Operations (Voice) -

- Acquired and installed a cable management database tool to document all voice and data cabling installed throughout the SSMC campus
- Upgraded the physical telephone infrastructure by replacing over 1950 obsolete IBM data cables with Cat 6 telecommunications cables

Data Center -

- 100% availability of financial management systems through year-end close
- Acquired and implemented platforms and infrastructure to support two OCFO systems supporting the President's Management Agenda – the Management Analysis and Reporting System and End-to-End Resource Management System.

1.0 Strategic and Business Results

The NOAA CITI program in FY2008 met DOC and NOAA goals and objectives. Program management and controls are in place to ensure that the program continues to meet its goals and objectives.

1.1 The NOAA Consolidated IT Infrastructure Supports All Four of NOAA's Direct Mission Goals

The Department of Commerce Consolidated IT Infrastructure (which incorporates the NOAA CITI) program has four objectives:

1. To operate and maintain an evolving infrastructure that supports mission objectives;
2. To improve services so that all Commerce operating units have timely, reliable, secure, innovative, and cost-effective access to Commerce information technology when and where needed;
3. Enable all Commerce employees to fulfill their responsibilities efficiently and effectively; and,
4. Streamline and unify Departmental and bureau IT Infrastructure investments.

The NOAA CITI program supports the DOC objectives and is consistent with the OMB Infrastructure Optimization Initiative (IOI) Line of Business created to provide an interoperable IT infrastructure that enables intra- and inter-agency collaboration. The optimization of NOAA's IT infrastructure allows programs to provide improved services to customers while minimizing resource burden. The NOAA OCIO IT vision is to strive for a secure and agile information enterprise with advanced computing capability that propels NOAA's scientific and operational missions.

The NOAA CITI program complements DOC's IT Infrastructure Management Framework. During the FY08 and 09 Budget cycles, adjustments were made to show transparent alignment with the three IOI commodity infrastructure areas by focusing on five clusters: Desktop/Seat Management; IT Help Desk; Data Centers; Telecommunications - Voice Networks; and Telecommunications - Data Networks. NOAA continues to work closely with DOC to review its progress toward consolidation, standardization, and integration of the IT infrastructure.

IT infrastructure includes all common and enterprise-level functions and systems that support mission activities and are not directly used for NOAA mission programs. It includes, but is not limited to: data networks (e.g., local area networks); desktop management (to include IT service center / help desk support); enterprise architecture; technology refresh (i.e., desktops, laptops, servers, mini-computers, mainframes, routers, switches, firewalls, storage); telecommunications; web presence; and collaboration software. In accordance with the NOAA Strategic Plan, NOAA ensures state-of-the-art IT infrastructure and secure IT and systems with the objective of increasing internal and external availability, reliability, security, and the use of IT and services.

1.2 Business Results

1.2.1 Program Management and Controls

IT management processes, initiatives, and performance measures originate from NOAA's Strategic and Operational IT Plans. NOAA Office of the Chief Information Officer and the NOAA Line/Staff Offices work together to centrally coordinate a proactive IT strategy, enterprise architecture, policies, and guidance. The funding and management of Line Office IT infrastructure is delegated to the respective Line Offices. IT infrastructure projects and programs are listed as PPBES capabilities and mapped to NOAA's IT infrastructure EA. NOAA looks for opportunities to assess the feasibility of and plan for common solutions and/or consolidation.

At the NOAA level, the NOAA's Program Planning and Integration (PPI) and Programming, Analysis and Evaluation (PA&E) offices provide management oversight from Planning to Programming to Budgeting to Execution (PPBES) using the PPBES process. At the Line Office level, the Climate Program Office provides management oversight for the Climate Goal Programs (Observations and Analysis, Climate Forcing, Projections and Predictions, Ecosystem, Regional Decision Support).

1.2.2 Monitoring Cost, Schedule and Performance

Program funding increases to meet planned Program Initiatives are requested through the NOAA PPBES process. Each PPBES Program capability in the Program Operating Plans (POPs) provides cost, schedule, and performance information. (See Attachment A).

Quarterly, Quad Charts are prepared for the NOAA Budget Office to track Cost, Schedule, and Performance, and update the NOAA CFO and PA&E on Risks and Issues and mitigation strategies.

1.3 Reviews

NOAA/Department of Commerce Review Process

NOAA Review Process

NOAA CIO Council Review Process. Each Line Office is represented by its CIO. The NOAA CIO Council meets weekly face-to-face to discuss the management and technical issues and challenges associated with DOC and NOAA policy as it impacts NOAA wide enterprise IT planning, IT security/information assurance, enterprise messaging, network services, acquisition strategies, and web presence. The Council Committees for Information Technology Security, Enterprise IT Architecture, Network Advisory, Geospatial Information, Enterprise Messaging, Web Services, and High Performance Computing & Communications meet at least quarterly to evaluate and share technical solutions across NOAA.

IT investments are refreshed with the periodic replacement of COTS components; e.g., processors, displays, computer operating systems, commercially available software (CAS), and communications capabilities within larger systems to assure continued supportability of that system through an indefinite service life under the following criteria:

- existing system component has malfunctioned and either cannot be repaired, or the repair costs exceed the replacement costs,
- existing system component has reached its life expectancy
- surrounding technical infrastructure has evolved and is incompatible with the existing component under consideration,
- newer technology has come to market that provides more capability for the same or lower Total Cost of Ownership, and
- requirements of the system have evolved to the extent that the system cannot meet the requirements with the existing technology

1.4 Security

Within IT Infrastructure, 58 systems are listed. 48 systems are accredited under requirements spelled out in NOA 212-13 (08/06/90) that is based on OMB and NIST guidance. Attachment B, the FY2008 FISMA report by the NOAA OCIO, documents the status of the IT security component of the NOAA CITI. Management, operational, and technical security controls are adequate to ensure the confidentiality, integrity, and availability of the information assets provided and managed by the NOAA CITI.

1.5 Performance Measures

The NOAA CITI provides program support for direct mission performance. It is not currently possible to directly link program support to direct mission strategic/business performance measures except where direct mission programs report inadequate program support as a cause of poor direct mission strategic/business performance. This circumstance is common across government and not unique to the NOAA or DOC IT infrastructure programs. There are no NOAA direct mission programs that report poor strategic or tactical performance due to inadequate IT infrastructure.

Developing as the core, primary management framework for IT infrastructure in the Executive Branch is the IT Infrastructure Line of Business (OMB). The following tables present performance data for NOAA's IT infrastructure within the ITILOB framework.

Midrange Servers

UNIX

Wintel

Linux

Other

METRICS AND VALIDATION				
Total Cost	\$2,511,223	\$9,374,356	\$2,602,211	\$567,713
Total Hardware Cost	\$265,839	\$973,950	\$286,105	\$60,797
Total Software Cost	\$55,383	\$202,906	\$59,605	\$12,666
Total Occupancy Cost	\$190,000	\$722,500	\$191,500	\$41,750
Total Unallocated Cost	\$0	\$0	\$0	\$0
Total Personnel Cost	\$2,000,000	\$7,475,000	\$2,065,000	\$452,500
Ratios				
% Hardware	11%	10%	11%	11%
% Software	2%	2%	2%	2%
% Occupancy	8%	8%	7%	7%
% Unallocated	0%	0%	0%	0%
% Personnel	80%	80%	79%	80%
% Non-personnel	20%	20%	21%	20%
Total Personnel	19.00	72.25	19.15	4.18
Total Adjusted FTE	19.00	72.25	19.15	4.18
Total Physical Devices	223	817	240	51
Total Logical Devices	0	0	0	0
Total Workload Units	223	817	240	51
Employee Per Capita	140,000	140,000	140,000	139,205
Contactor Per Capita	100,000	100,000	100,000	100,000
Devices Per FTE	12	11	13	12
Devices per Adj. FTE	12	11	13	12
Occupancy Cost per FTE	\$10,000	\$10,000	\$10,000	\$9,988
Occupancy Cost per Adj. FTE	\$10,000	\$10,000	\$10,000	\$9,988
Cost per Workload Unit	\$11,261	\$11,474	\$10,843	\$11,132

Telecommunications Systems & Support (TSS)

WAN-data

METRICS AND VALIDATION	
Total Cost	\$3,910,016
Total Hardware Cost	\$55,000
Total Software Cost	\$11,000
Total Occupancy Cost	\$180,000
Total Transmission Cost	\$1,364,016

Total Unallocated Cost	\$0
Total Personnel Cost	\$2,300,000
	-
Ratios	-
% Hardware	1%
% Software	0%
% Occupancy	5%
% Unallocated	0%
% Personnel	59%
% Non-personnel	41%
	-
Total Personnel	18.00
Total Adjusted FTE	18.00
Total Physical Devices	
Total Logical Devices	
Total Workload Units (Devices)	26,878
Employee Per Capita	\$140,000
Contactor Per Capita	\$100,000
Devices Per FTE	1,493
Devices per Adj. FTE	1,493
Occupancy Cost per FTE	\$10,000
Occupancy Cost per Adj. FTE	\$10,000
Cost per Workload Unit	\$145

**Telecommunications Systems & Support
(TSS)
MAN**

METRICS AND VALIDATION	
Total Cost	\$4,621,650
Total Hardware Cost	\$55,000
Total Software Cost	\$11,000
Total Occupancy Cost	\$4,150
Total Transmission Cost	\$4,500,000
Total Unallocated Cost	\$0
Total Personnel Cost	\$51,500
	-
Ratios	-
% Hardware	1%
% Software	0%
% Occupancy	0%
% Transmission	97%
% Unallocated	0%
% Personnel	1%
% Non-personnel	99%

Total Personnel	0.70
Total Adjusted FTE	0.70
Total Physical Devices	
Total Logical Devices	
Total Workload Units (Gigabytes)	3,600,000
Employee Per Capita	\$140,000
Contactor Per Capita	\$36,667
Gigabytes Per FTE	5,142,857
Gigabytes per Adj. FTE	5,142,857
Occupancy Cost per FTE	\$5,929
Occupancy Cost per Adj. FTE	\$5,929
Cost per Workload Unit	\$1

Telecommunications Systems & Support (TSS)

LAN

METRICS AND VALIDATION	
Total Cost	\$107,365,831
Total Hardware Cost	\$4,889,627
Total Software Cost	\$611,203
Total Occupancy Cost	\$1,115,000
Total Unallocated Cost	\$0
Total Personnel Cost	\$100,750,000
Ratios	
% Hardware	5%
% Software	1%
% Occupancy	1%
% Unallocated	0%
% Personnel	94%
% Non-personnel	6%
Total Personnel	111.50
Total Adjusted FTE	111.50
Total Physical Devices	
Total Logical Devices	
Total Workload Units (Active Ports)	39,887
Employee Per Capita	\$140,000
Contactor Per Capita	\$1,000,000
Active Ports Per FTE	358
Active Ports per Adj. FTE	358

Occupancy Cost per FTE	\$10,000
Occupancy Cost per Adj. FTE	\$10,000
Cost per Workload Unit	\$2,692

Telecommunications Systems & Support (TSS)

Internet Access

METRICS AND VALIDATION	
Total Cost	\$1,764,783
Total Hardware Cost	\$488,963
Total Software Cost	\$61,120
Total Occupancy Cost	\$32,700
Total Transmission Cost	\$810,000
Total Unallocated Cost	\$0
Total Personnel Cost	\$372,000
	-
Ratios	
% Hardware	28%
% Software	3%
% Occupancy	2%
% Unallocated	0%
% Personnel	21%
% Non-personnel	79%
	-
Total Personnel	3.28
Total Adjusted FTE	3.28
Total Physical Devices	
Total Logical Devices	
Total Workload Units (Gigabytes)	5,040
Employee Per Capita	\$139,381
Contactor Per Capita	\$99,767
Gigabytes Per FTE	1,537
Gigabytes per Adj. FTE	1,537
Occupancy Cost per FTE	\$9,970
Occupancy Cost per Adj. FTE	\$9,970
Cost per Workload Unit	\$350

Telecommunications Systems & Support (TSS)

Wide Area Voice

METRICS AND VALIDATION	
Total Cost	\$3,198,125

Total Hardware Cost	\$0
Total Software Cost	\$0
Total Occupancy Cost	\$96,875
Total Transmission Cost	\$1,800,000
Total Unallocated Cost	\$0
Total Personnel Cost	\$1,301,250
	-
Ratios	-
% Hardware	0%
% Software	0%
% Occupancy	3%
% Transmission	56%
% Unallocated	0%
% Personnel	41%
% Non-personnel	59%
	-
Total Personnel	9.69
Total Adjusted FTE	9.69
Total Physical Devices	
Total Logical Devices	
Total Workload Units (Minutes)	2,500,000
Employee Per Capita	\$140,042
Contactor Per Capita	\$99,638
Minutes Per FTE	257,998
Minutes per Adj. FTE	257,998
Occupancy Cost per FTE	\$9,997
Occupancy Cost per Adj. FTE	\$9,997
Cost per Workload Unit	\$1.279

Telecommunications Systems & Support (TSS)

Voice Premise Telephony

METRICS AND VALIDATION	
Total Cost	\$6,980,877
Total Hardware Cost	\$402,602
Total Software Cost	\$0
Total Occupancy Cost	\$120,525
Total Transmission Cost	\$4,920,000
Total Unallocated Cost	\$0
Total Personnel Cost	\$1,537,750
	-
Ratios	-
% Hardware	6%
% Software	0%
% Occupancy	2%

% Unallocated	0%
% Personnel	22%
% Non-personnel	78%
Total Personnel	12.05
Total Adjusted FTE	12.05
Total Physical Devices	
Total Logical Devices	
Total Workload Units (Extensions)	16,775
Employee Per Capita	\$140,042
Contactor Per Capita	\$100,000
Extensions Per FTE	1,392
Extensions per Adj. FTE	1,392
Occupancy Cost per FTE	\$10,002
Occupancy Cost per Adj. FTE	\$10,002
Cost per Workload Unit	\$416.15

Telecommunications Systems & Support (TSS)

Cellular

METRICS AND VALIDATION	
Total Cost	\$3,362,254
Total Hardware Cost	\$132,310
Total Occupancy Cost	\$83,000
Total Transmission Cost	\$2,116,944
Total Unallocated Cost	\$0
Total Personnel Cost	\$1,030,000
Ratios	
% Hardware	4%
% Occupancy	2%
% Transmission	63%
% Unallocated	0%
% Personnel	31%
% Non-personnel	69%
Total Personnel	8.30
Total Adjusted FTE	8.30
Total Physical Devices	
Total Logical Devices	
Total Workload Units (Minutes)	2,116,944
Employee Per Capita	\$140,000
Contactor Per Capita	\$0

Minutes Per FTE	255,053
Minutes per Adj. FTE	255,053
Occupancy Cost per FTE	\$10,000
Occupancy Cost per Adj. FTE	\$10,000
Cost per Workload Unit (Minutes)	\$1.588

Telecommunications Systems & Support (TSS)

Videoteleconference

METRICS AND VALIDATION	
Total Cost	\$1,348,200
Total Hardware Cost	\$225,600
Total Software Cost	\$9,400
Total Occupancy Cost	\$75,200
Total Transmission Cost	\$0
Total Unallocated Cost	\$192,000
Total Personnel Cost	\$846,000
Ratios	
% Hardware	17%
% Software	1%
% Occupancy	6%
% Transmission	0%
% Unallocated	14%
% Personnel	63%
% Non-personnel	37%
Total Personnel	7.52
Total Adjusted FTE	7.52
Total Physical Devices	
Total Logical Devices	
Total Workload Units (Minutes)	324,000
Employee Per Capita	\$140,000
Contactor Per Capita	\$100,000
Minutes Per FTE	43,085
Minutes per Adj. FTE	43,085
Occupancy Cost per FTE	\$10,000
Occupancy Cost per Adj. FTE	\$10,000
Cost per Workload Unit	\$4.161

**End-user Systems&Support
Desktop Management**

METRICS AND VALIDATION	2008 Data
Total Cost	\$29,195,372
Total Hardware Cost	\$4,167,225
Total Software Cost	\$3,263,433
Total Occupancy Cost	\$1,700,154
Total Unallocated Cost	\$0
Total Personnel Cost	\$20,064,561
Ratios	
% Hardware	14%
% Software	11%
% Occupancy	6%
% Unallocated	0%
% Personnel	69%
% Non-personnel	31%
Total FTE (Insourced + Contractors)	169.00
Total Adjusted FTE (Above + Outsourced Personnel)	169.00
Total Primary Devices (Desktop +Mobile + Unallocated)	26,436
Employee per Capita	\$124,091
Contractor per Capita	\$115,694
Primary Devices Per FTE	156
Primary Devices per Adjusted FTE	156
Primary Devices per User	1.47
Users per FTE	107
Users per Adjusted FTE	107
Occupancy Cost per FTE	\$10,060
Occupancy Cost per Adjusted FTE	\$10,060
Cost per User	\$1,619
Cost per Primary Device	\$1,104
C&P Percentage of Total EUSS	74%
End User Same as ITHD?	TRUE
Annual Hardware Cost per Primary Device	\$158
Estimated Primary Device Purchase Cost	\$631

**End-user Systems&Support
IT Helpdesk**

METRICS AND VALIDATION	2008 Data
Total Cost	\$10,042,713
Total Hardware Cost	\$1,409,732
Total Software Cost	\$1,069,322
Total Occupancy Cost	\$563,360
Total Transmission Cost	\$0
Total Unallocated Cost	\$467,594
Total Personnel Cost	\$6,532,705
	-
Ratios	
% Hardware	14%
% Software	11%
% Occupancy	6%
% Transmission	0%
% Unallocated	5%
% Personnel	65%
% Non-personnel	35%
	-
Total FTE (Insourced + Contractors)	56.00
Total Adjusted FTE (Above + Outsourced Personnel)	56.00
Total Handled Contacts (Voice + IVR + eMail + Web)	69,114
Employee Per Capita	\$123,138
Contactor Per Capita	\$113,054
Contacts per FTE per day	5.3
Contacts per Adjusted FTE per Day	5.3
Contacts per User	3.8
Users per FTE	322
Users per Adjusted FTE	322
Occupancy Cost per FTE	\$10,060
Occupancy Cost per Adjusted FTE	\$10,060
Cost per User	\$557
Cost per Handled Contact	\$145.31
ITHD Percentage of Total EUSS	26%
End User same as C&P?	TRUE

2.0 Customer Results

The N-OCIO Infrastructure provides the largest portion of the foundation for IT programmatic support in NOAA. It encompasses all layers of IT, from network cabling to enterprise-wide applications hosted by the NOAA financial and administrative data center. It is the primary delivery mechanism for office automation services, back office

services, help desk and user support services, IT security services, and local and wide area networking services, and hosting for enterprise-level financial management and administrative applications

Stakeholder	Infrastructure Results
All NOAA employees	Provides tools for performing duties
NOAA CIO	Managed and cost effective
NOAA CFO	Cost effective
Project Managers	Meets foundational needs for programmatic IT
System Owners	Risk is managed, stable platform that meets requirements
Authorizing Officials	Functional and secure

2.1 Customer Requirements and Costs

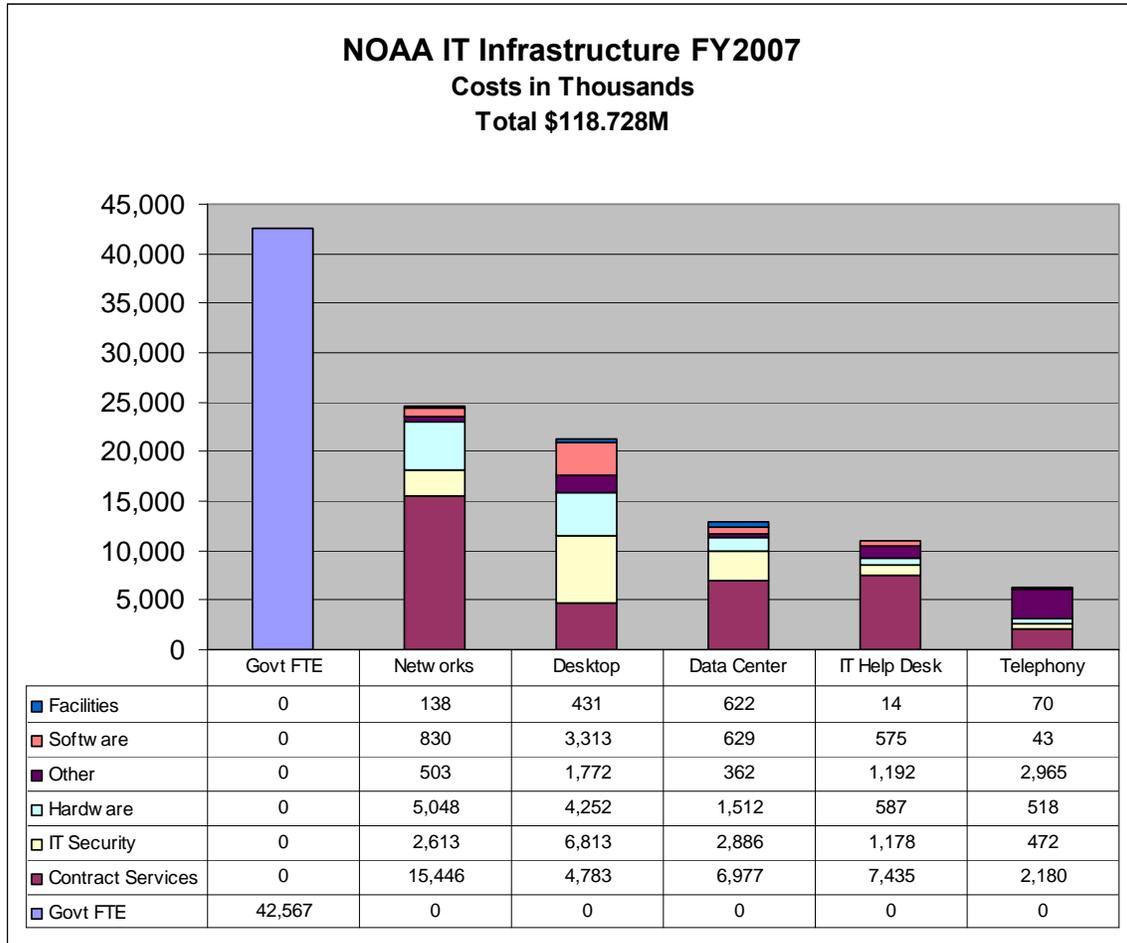
NOAA's IT Infrastructure serves diverse customers.

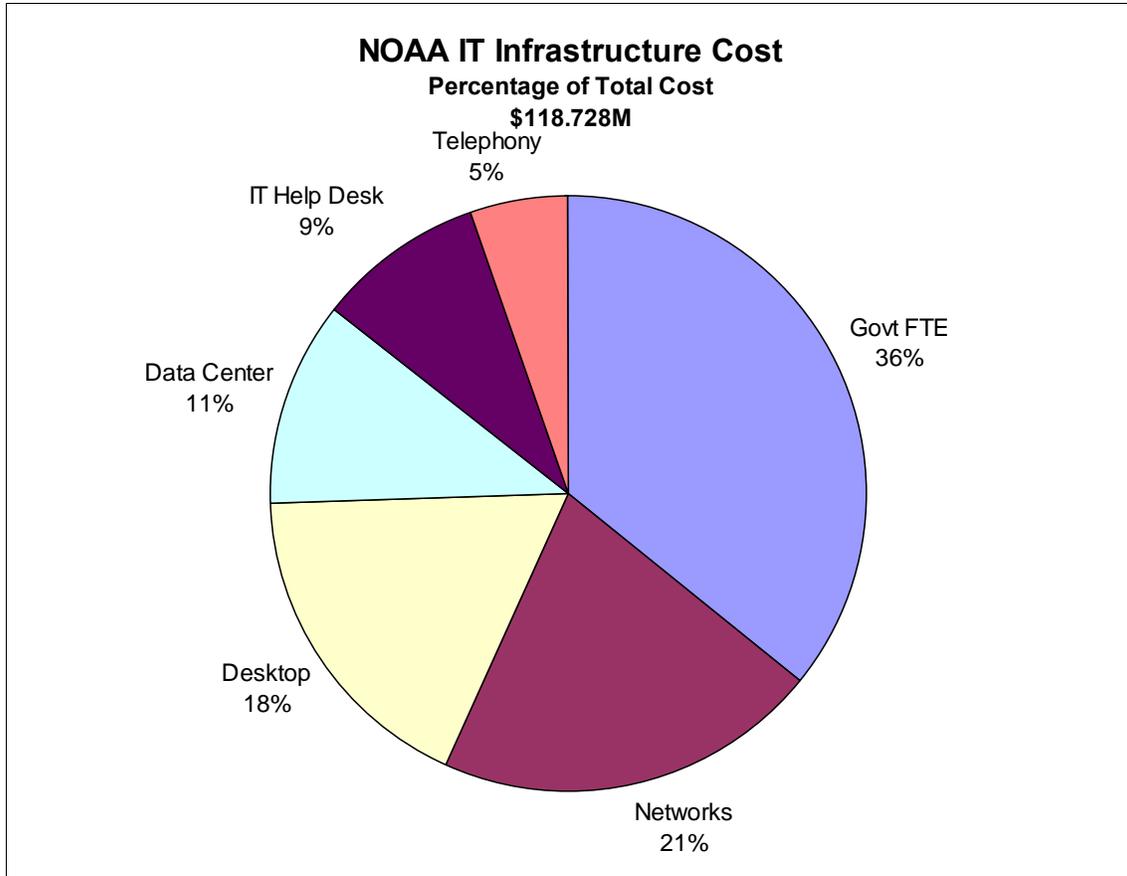
The IT Infrastructure computing resource needed to support NOAA's program is a steady state investment. It is critical to provide an infrastructure that delivers products and services using information technology solutions that meet the needs of the science and administrative personnel.

IT Technical refresh is performed based on established industry practices, routinely on a 3 year cycle for desktops, and 4 years for server systems and communications equipment due to their higher cost. NOAA Research desktop operating systems include Linux, MacIntosh, and Windows. According to Gartner (**Use Processes and Tools to Reduce TCO for PCs, 2005-2006 Update, 13 January 2006**), PC hardware and operating system choices are no longer the greatest determinants of PC total cost of ownership (TCO). The implementation of policies, best practices and processes offers the main opportunities for enterprises to reduce the TCO of their PC installed base across its life cycle.

Services	Description	Customers
Office Automation	Office suites, email, calendar	All SSMC users
Data Center	Hosting enterprise-level administrative and financial management systems	All NOAA users
Back Office services	Email servers, database servers, web servers	Email administrators, DBAs, application developers, web masters
Help Desk services	User support services	All NOAA HQ users
LAN, MAN, WAN	Network authentication, file storage , data back-up,	System owners, system administrators, Metro area

	Campus backbones, switches and routers, MAN, and WAN monitoring	and field office users
Telephony	FTS2001 procurement and management	SSMC campus users (except OAR)
IT Security Services	Patching, monitoring, testing, certification and accreditation	System Owners, system administrators, help desk, users, Authorizing Officials





2.2 Performance Measures
(per FY2008 Operational IT Plan)

Security -

- Accredited 100% of NOAA's major IT systems by 9/30/07 with full Authorization to Operate

Network Operations (Data) -

- 99.7% availability of Washington DC Metropolitan Area Network
- Supported 14,800 centrally-managed electronic mail accounts
- Managed an average of 785,000 electronic mail messages per day (including internal and external, inbound and outbound)
- Processed an average of 79 gigabytes of electronic mail data per day
- Supporting over 145 Web sites and 1.2 TB of web content across all lines offices and providing COOP redundancy for these offices for web infrastructure
- Processing of web request 4.5 TB per day up to 19 TB per day during peak weather events

Network Operations (Voice) -

- Exceeded target baseline for responding to trouble calls – target: 95% < 4 hrs, actual: 97% < 2 hrs
- Exceeded target CAMS acceptance rate of bills, 99.9% accuracy vs. 98%

Data Center -

- 100% availability of financial management systems through year-end close

IT Help Desk -

- Responded to 10,000+ help desk requests (6,000+ pertained to C.REQUEST)

3.0 Financial Performance

All services now identified as part of the CITI have been provided to NOAA customers continuously for decades but in a decentralized fashion. FY2008 represents only the third year that NOAA established IT Infrastructure (as defined herein and by the ITILOB) as a discrete program. The tracking, collection, and reporting capabilities for CITI financial information are in an early stage of development. This is due both to the short time to develop the capabilities and the inherent difficulty, acknowledged across government, of addressing program support costs and benefits, especially IT. The NOAA CIO Council, in cooperation with the CFO Council, has undertaken a coordinated effort to improve CITI financial management capabilities. (See Section 4.0, Innovation, for discussion of CIO/CFO Council actions to improve the financial reporting capabilities of the CITI).

Note that the PPBES Mission Support/IT Support sub-program does not completely match the CITI as defined by the Department and ITILOB. However, it does match closely enough that the PPBES reporting process provides useful financial performance information.

3.1 Current Performance vs. Baseline

In FY2008 the CITI performed within budgeted funding.

3.2 Performance Measures

Via the PPBES Quad Chart reporting, program performance measures are mapped to project milestone activities, planned and obligated budget spending, and any risks or issues with mitigation strategies. (See Attachment C).

3.3 Cost Benefit Analysis

The PPBES Programming phase employs cost-benefit analysis to produce programming decisions that are inputs to budget formulation. However, for FY2008, for the reasons stated in 4.0, it is not possible to execute a valid, formal cost-benefit analysis.

3.4 Financial Performance Review

On an annual basis, the Line Office report to the NOAA CIO to identify technical refresh requirements for software, hardware, and services to meet steady state operations within the IT Support Services baseline IT budget. These requirements are prioritized and implemented as budgeted.

4.0 Innovation to Meet Future Customer Needs

Strategic/Business Results:

- The CIO and CFO Councils have formed the IT Cost Accounting Working Group to develop a methodology for tracking, collecting, and reporting IT costs, with a focus on discriminating between infrastructure, program support, and direct program IT spending
- NOAA, through, the Department, is participating in the development of the ITILOB.

Customer Results:

- The NOAA OCIO is pursuing four IT modernization initiatives to keep pace with customer requirements and to improve customer results, to-wit:
 - IT Security
 - Replace SSMC telephone system (obsolete equipment and lack of spare parts is causing severe adverse impacts)
 - NOAANet
 - Email consolidation
- **NOTE – Risk Factor – as yet (12/5/08), new funding for only IT Security, others denied as yet for Direct Bill**

Financial Performance:

- NOAA is planning an enterprise IT support services contract to provide more cost-effective IT support services

4.1 Number and Types of Users

Line Office	Federal	Commissioned	Contractor	Associate	Total
HDQ	338	4	99	1	442
NESDIS	876	8	997	89	1970

NFA	776	0	328	110	1214
NMAO	585	179	37	16	817
NMFS	3196	30	1018	211	4455
NOS	1192	42	982	49	2265
NWS	4921	13	1069	172	6175
OAR	848	13	456	861	2178
PPI	12	1	14	1	28
Total:	12744	290	5000	1510	19544

4.2 Funding Levels

Recent trends in government spending indicate that agencies should not expect significant increases in their budgets. **RISK FACTOR – Budget impact of financial collapse and recession.** This, coupled with the requirement to accommodate more users and incorporate evolving technology, will force the program to find efficiencies and to do more with the same amount of resources.

Attachment A

Cost and Schedule Information from Program Operating Plan (POP) for Mission Support – IT Support sub-Goal Program

Cost: POP Current Program Resources

Performance Measures

- MS-ITT Availability of network and application services to NOAA users community
- MS-ITT Certify and Accredited 100% of NOAA systems
- MS-ITT Reduce the number of failure-to-act incidents
- MS-ITT C&A Packages for DOC Review
- MS-ITT Web Operations Center (WOC) Availability

Current Program Resources

	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15	TC
MS-ITT-ADI IT Administration and Regulation								Attached Documents [0]	
	\$0	\$0	\$4,091	\$4,091	\$4,091	\$4,091	\$4,091	\$4,091	-
FTE	10	10	10	10	10	10	10		
NOAA Corps	0	0	0	0	0	0	0		
Contractor	0	0	0	0	0	0	0		
Associate	0	0	0	0	0	0	0		
Policy Formulation and Direction	\$0	\$0	\$4,091	\$4,091	\$4,091	\$4,091	\$4,091	\$4,091	-
MS-ITT-SEI IT Security								Attached Documents [0]	
	\$0	\$0	\$7,637	\$9,637	\$9,637	\$9,637	\$9,637	\$9,637	-
FTE	8	8	8	8	8	8	8		
NOAA Corps	0	0	0	0	0	0	0		
Contractor	4	4	4	4	4	4	4		
Associate	0	0	0	0	0	0	0		
IT Security	\$0	\$0	\$7,637	\$9,637	\$9,637	\$9,637	\$9,637	\$9,637	-
MS-ITT-NET IT Program Management								Attached Documents [0]	
	\$0	\$0	\$31,846	\$28,120	\$28,077	\$27,940	\$28,455	\$28,455	-
FTE	12	12	12	12	12	12	12		
NOAA Corps	0	0	0	0	0	0	0		
Contractor	9	9	9	9	9	9	9		
Associate	0	0	0	0	0	0	0		
Policy Formulation and Direction	\$0	\$0	\$31,846	\$28,120	\$28,077	\$27,940	\$28,455	\$28,455	-
MS-ITT-ARC Enterprise Architecture								Attached Documents [0]	
	\$0	\$0	\$2,292	\$2,292	\$2,292	\$2,292	\$2,292	\$2,292	-
FTE	2	2	2	2	2	2	2		
NOAA Corps	0	0	0	0	0	0	0		
Contractor	4.5	4.5	4.5	4.5	4.5	4.5	4.5		
Associate	0	0	0	0	0	0	0		
Policy Formulation and Direction	\$0	\$0	\$2,292	\$2,292	\$2,292	\$2,292	\$2,292	\$2,292	-
MS-ITT-SPT IT Support for Administrative Systems								Attached Documents [0]	
	\$0	\$0	\$20,900	\$20,046	\$20,046	\$20,046	\$20,046	\$20,046	-
FTE	72	72	72	72	72	72	72		
NOAA Corps	0	0	0	0	0	0	0		
Contractor	0	0	0	0	0	0	0		
Associate	0	0	0	0	0	0	0		
Policy Formulation and Direction	\$0	\$0	\$18,451	\$17,597	\$17,597	\$17,597	\$17,597	\$17,597	-
Office of Chief Information Officer	\$0	\$0	\$182	\$182	\$182	\$182	\$182	\$182	-
Geostationary Systems - N	\$0	\$0	\$847	\$847	\$847	\$847	\$847	\$847	-
Polar Orbiting Systems - POES	\$0	\$0	\$336	\$336	\$336	\$336	\$336	\$336	-
Polar Orbiting Systems - NPOESS	\$0	\$0	\$1,084	\$1,084	\$1,084	\$1,084	\$1,084	\$1,084	-
MS-ITT-MGT Management								Attached Documents [0]	
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	-
FTE									
NOAA Corps									
Contractor									

Associate									
Geostationary Systems - N	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Polar Orbiting Systems - POES	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Polar Orbiting Systems - NPOESS	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Current Program Total	\$0	\$0	\$66,766	\$64,186	\$64,143	\$64,006	\$64,521	\$64,521	-
FTE Total	104	104	104	104	104	104	104	104	-
NOAA Corps Total	0	0	0	0	0	0	0	0	-
Contractor Total	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	-
Associate Total	0	0	0	0	0	0	0	0	0

Schedule: POP Program Schedule

	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15
MS-ITT-ADI IT Administration and Regulation								Attached Documents [0]
MS-ITT-SEI IT Security								Attached Documents [0]
Corporate IT SETA: Identify ISS-LOB SSC (OPM)								
Corporate IT SETA: Develop IT Sec Intern Program								
Corporate IT SETA: Fully Staff program								
Corporate C&A Team: Identify resource gap for C&A QA reviews								
Corporate C&A Team: Hire qualified personnel								
C&A on NOAA/OCIO IT systems: Identify resource gap for C&A QA reviews								
C&A on NOAA/OCIO IT systems: Hire qualified personnel								
MS-ITT-NET IT Program Management								Attached Documents [0]
IT Service Center: Initiate project management				Q1				
IT Service Center: Establish and operate a governing body				Q1				
IT Service Center: Clarify and validate new vision				Q1				
IT Service Center: Determine services/channels				Q2				
IT Service Center: Communicate new Help Desk (HD) vision				Q2				
IT Service Center: Determine Tier 1&2 location and ownership				Q4				
IT Service Center: Plan Tier 1&2 move				Q4				
IT Service Center: Develop and document SOP/business processes				Q4				
IT Service Center: Complete C&A Process					Q2			
IT Service Center: Update SOP/business processes					Q2			
IT Service Center: Conduct study to gather Tier 1 data					Q3			
IT Service Center: Identify and document necessary roles & staffing needs				Q4				
IT Service Center: Select and obtain a single contract for NOAA					Q1			
IT Service Center: Plan Knowledge transfer					Q1			
IT Service Center: Conduct Tier 1 knowledge transfer					Q2			
IT Service Center: Conduct Tier 1 training					Q2			
IT Service Center: Conduct Tier 2 & 3 knowledge transfer					Q3			
IT Service Center: Conduct Tier 2 & 3 training					Q3			

IT Service Center: Select Trouble Ticket Tracking system				Q4				
IT Service Center: Select PC Mgmt package				Q4				
IT Service Center: Select Telephony tools					Q1			
IT Service Center: Research & analyze network				Q4				
IT Service Center: Implement selected Trouble Ticket system					Q2			
IT Service Center: Implement select PC Mgmt package					Q1			
IT Service Center: Implement selected telephony tools					Q2			
IT Service Center: Select, procure, install HD PCs					Q2			
Email: Finalize Requirements gathering for NOAA email conversion		X		X		X		
Email: Design NOAA email system			X					
Email: Issue RFP			X					
Email: Begin email conversion				X				
Email: Construct redundant data centers				X				
Email: Provide user training				X	X			
Email: Migrate user accounts				X	X			
Email: Migrate business systems to new directory and messaging					X			
Email: Decommission old email system						X		
Email: Decommission old directory system							X	
OneNOAA Web: Common Look and Feel		X						
OneNOAA Web: Policy and Governance			X					
OneNOAA Web: Content Management				X				
OneNOAA Web: Web Portal					X			
OneNOAA Web: Service Level Delivery						X		
IT SECURITY: Upgrade SSMC Internet Service Provider (ISP) connection to OC48 (2.5 Gigabits)					Q1			
IT SECURITY: Add redundant routing components to SSMC core network					Q3			
IT SECURITY: Implement N-CIRT Security Center phase 1					Q3			
IT SECURITY: Deploy web servers to additional redundant data centers					Q4			
IT SECURITY: N-CIRT: Deploy first new NOAAnet Intrusion Detection System (IDS) site					Q4			
IT SECURITY: N-CIRT: Deploy second new NOAAnet IDS site						Q3		
IT SECURITY: Add backup and storage capabilities to web servers						Q4		
IT SECURITY: Upgrade SSMC ISP connection to OC192 (10 Gigabits)							Q1	
IT SECURITY: Implement N-CIRT Security Center phase 2							Q3	
IT SECURITY: N-CIRT: Deploy new NOAAnet IDS site							Q4	
IT SECURITY: Harden SSMC backbone to 99.99% availability								Q2
IT SECURITY: Service Level Delivery								Q4
NOAAnet: Complete transition of all NOAA Line Office Wide Area Networks (WANs) to the NOAAnet				Q4				
NOAAnet: Provide multiple transparent external connections throughout the nation, by maintaining up to 4 ISP large scale connections						Q4		
NOAAnet: Complete hardening of NOAAnet in order to produce a 99.99% uptime network								Q3
NOAAnet: Service Level Delivery								Q4
PHONE: Acquisition & Planning: Validate cost profiles for each of the vendor offerings				Q4				

PHONE: Acquisition & Planning: Fair Opportunity Analysis (FOA)				Q1				
PHONE: Pre System Deployment: Transition implementation plan: Transition plan-Hardware Delivery Cabling				Q2				
PHONE: Pre System Deployment: Transition implementation plan: Telecommunication circuit installation (non-recurring installation charge)				Q2				
PHONE: Implementation: Phase 1 (SSMC-1 & -2) [CPE quote finalized; station cabling, hardware, software, & circuits installed; seat charge invoiced]				Q2				
PHONE: Implementation: Phase 2 (SSMC-3)				Q2				
PHONE: Implementation: Phase 3 (SSMC-4)				Q3				
PHONE: Service Level Delivery				Q4				
HSPD-12 LACS: Issue new PC card reader guidance	Q3							
HSPD-12 LACS: Develop project charter and high level design	Q3							
HSPD-12 LACS: Conduct initial project review	Q3							
HSPD-12 LACS: Scope requirement for legacy PC upgrades		Q3						
HSPD-12 LACS: Survey legacysystems..... for candidates needing LACS		Q3						
HSPD-12 LACS: Complete project requirements and system design			Q3					
HSPD-12 LACS: Conduct critical design review			Q4					
HSPD-12 LACS: Procure retrofit card readers and client PC SW				Q1				
HSPD-12 LACS: Prepare training & communications for users				Q1				
HSPD-12 LACS: Procure and install IDMS				Q1				
HSPD-12 LACS: Commence user communication				Q1				
HSPD-12 LACS: Install retrofit card readers and PC client SW				Q2				
HSPD-12 LACS: Perform C&A on IDMS				Q2				
HSPD-12 LACS: Integrate IDMS w/ PACS				Q2				
HSPD-12 LACS: Test IDMS				Q2				
HSPD-12 LACS: Integrate legacy systems with IDMS & Test				Q3				
HSPD-12 LACS: Train users				Q3				
HSPD-12 LACS: Service Level Delivery					Q1			
MS-ITT-ARC Enterprise Architecture							Attached Documents [0]	
NOAA Geospatial: Networking and GIS Workshop								
NOAA Geospatial: GIS Networking Framework	X							
NOAA Geospatial: IT Security and GIS Workshop	X							
NOAA Geospatial: GIS Security Framework	X							
NOAA Geospatial: Existing Systems Inventory and Review	X							
NOAA Geospatial: Draft GIS IT Target Architecture		X						
NOAA Geospatial: Inter-Program Office Prototype			X					
NOAA Geospatial: Inter-Program Office Prototype Outcomes Review			X					
NOAA Geospatial: Refined Draft GIS IT Target Architecture			X					
NOAA Geospatial: Program Office Implementation Plan				X				
NOAA Geospatial: Program Office GIS IT Integration				X				
NOAA Geospatial: GIS IT Architecture Comprehensive Review with Line Offices				X				
NOAA Geospatial: Inter-Line Office Prototype Design				X				
NOAA Geospatial: Inter-Line Office Prototype					X			

Implementation									
NOAA Geospatial: Inter-Line Office Prototype Outcomes Review						X			
NOAA Geospatial: Final GIS IT Target Architecture						X			
NOAA Geospatial: Implementation Plan - GIS IT Architecture for SSMC							X		
NOAA Geospatial: SSMC GIS IT Architecture Integration Project								X	
NOAA Geospatial: NOAA Regional Office GIS IT Architecture Implementation Plan								X	
NOAA Geospatial: Regional Office GIS Services Integration								X	
NOAA EA: Integrate IT security into the NOAA EA	X								
NOAA EA: Establish NOAA EA lifecycle, maintenance process and governance model	X								
NOAA EA: Integrate the EA with PPBES and CPIC	X	X							
NOAA EA: Develop annual EA guidance for CPIC and analytical recommendations for Planning and Programming phases	X	X	X	X	X	X	X	X	
NOAA EA: Integrate the NOAA Functional Model into the EA	X								
NOAA EA: Specify EA tool requirements (repository and analytical capabilities)	X								
NOAA EA: Acquire/Implement EA repository and analytical tools	X								
NOAA EA: Maintain and operate EA repository		X	X	X	X	X	X	X	
NOAA EA: Establish initial version of NOAA Technical Reference Model (TRM)									
NOAA EA: Evolve and maintain TRM to include technical domains and incorporate technology forecast	X	X	X	X	X	X	X	X	
NOAA EA: Develop NOAA data model and integrate with DMIT and DMAC activities to produce comprehensive NOAA data architecture	X	X							
NOAA EA: Develop EA communications, education and outreach strategy and plan	X								
NOAA EA: Define, develop and maintain the NOAA Segment Architectures (beyond NOSA)	X	X	X	X	X	X	X	X	
MS-ITT-SPT IT Support for Administrative Systems								Attached Documents [0]	
Grants Online: Technology Refresh (hardware)			X				X		
Grants Online: Software			X	X	X	X	X	X	
Grants Online: Security (C&A)			X				X		
Grants Online: Interface with the OMB e-Grants Line of Business				X	X				
MS-ITT-MGT Management								Attached Documents [0]	

Performance: POP Current Program Outputs

	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15	
MS-ITT-ADI IT Administration and Regulation								Attached Documents [0]	
	Policy Formulation and Direction								
MS-ITT-SEI IT Security								Attached Documents [0]	
	IT Security								
MS-ITT-NET IT Program Management								Attached Documents [0]	
	Policy Formulation and Direction								
MS-ITT-ARC Enterprise Architecture								Attached Documents [0]	
	Policy Formulation and Direction								
MS-ITT-SPT IT Support for Administrative Systems								Attached Documents [0]	
	Policy Formulation and Direction								
	Office of Chief Information Officer								

	Geostationary Systems - N	
	Polar Orbiting Systems - POES	
	Polar Orbiting Systems - NPOESS	
MS-ITT-MGT Management		Attached Documents [0]
	Geostationary Systems - N	
	Polar Orbiting Systems - POES	
	Polar Orbiting Systems - NPOESS	

Attachment B
 FY2007 FISMA Report (portion)

		a. Number of systems certified and accredited		b. Number of systems for which security controls have been tested and reviewed in the past year		c. Number of systems for which contingency plans have been tested in accordance with policy	
Bureau Name	FIPS 199 System Impact Level	Total Number	Percent of Total	Total Number	Percent of Total	Total Number	Percent of Total
NOAA NOS	High	0					
	Moderate	6	100%	6	100%	6	100%
	Low	7	100%	7	100%	7	100%
	Not Categorized						
	Sub-total	13	100%	13	100%	13	100%
NOAA NWS	High	12	100%	12	100%	12	100%
	Moderate	16	100%	16	100%	16	100%
	Low	9	100%	9	100%	9	100%
	Not Categorized						
Sub-total	37	100%	37	100%	37	100%	
NOAA NMFS	High						
	Moderate	25	100%	25	100%	25	100%
	Low	2	100%	2	100%	2	100%
	Not Categorized						
Sub-total	27	100%	27	100%	27	100%	
NOAA OAR	High	1	100%	1	100%	1	100%
	Moderate	8	100%	8	100%	8	100%
	Low	11	100%	11	100%	11	100%
	Not Categorized						
Sub-total	20	100%	20	100%	20	100%	
NOAA OMAO +OCIO	High						
	Moderate	14	100%	13	93%	14	100%
	Low	1	100%	1	100%	0	0%
	Not Categorized						
Sub-total	15	100%	14	93%	14	93%	
NOAA NESDIS	High	6	100%	6	100%	6	100%
	Moderate	12	100%	12	100%	12	100%
	Low						
	Not Categorized						
Sub-total	18	100%	18	100%	18	100%	
Agency Totals	High	19	100%	19	100%	19	100%
	Moderate	81	100%	80	99%	81	100%
	Low	30	100%	30	100%	29	97%
	Not Categorized	0		0		0	
Total	130	100%	129	99%	129	99%	

Attachment C
MS-IT Services Quad Chart



Office of the Chief Information Officer
As of Third Quarter, FY 2008
Joe Klimavicz, NOAA CIO

**G Corporate Performance Measures (GPRA & non-GPRA)
(or other relevant measures)**

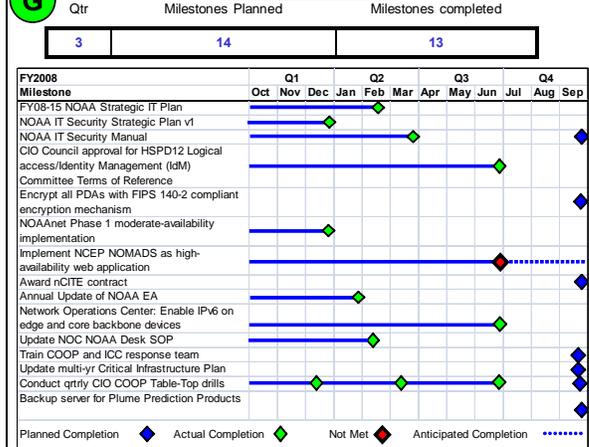
CPM/Other Measure	This Q planned	This Q actual	FY08 Target
Reduce the number of "failure to act" incidents by 15%	N/A	8/YTD	≤23/year
Full Authorization to Operate for all NOAA IT Systems (Complete C&A)	100%	98%	100%
Availability of Network Services	99.7%	>99.7%	99.7%
Web Operations Center (WOC) Availability	99.0%	100%	99.0%
Deliver timely and quality products to DHS National Op Ctr	100%	100%	100%
Comply with Federal COOP requirements, policies and directives	100%	100%	100%

G Key Issues/Risks

Unmet Milestone: Web Operations Center: Implement NCEP NOMADS as high-availability web application.
Issue: Project delayed due to funding.
Risk: None.
Mitigation: With adequate funding, OCIO expects to complete the implementation during Q4 FY08.

Unmet Performance Measure: Full Authorization to Operate for all NOAA IT Systems (Complete C&A)
Issue: NOAA's Certification & Accreditation (C&A) process was executed as planned and the security controls testing discovered weaknesses that must be addressed. The Authorizing Official issued an Interim Authority to Operate (IATO) instead of a full ATO for a limited time to address these weaknesses.
Risk: Two NOAA systems are operating with an IATO indicating that the security controls are not providing the desired level of protection. The systems are not considered accredited for the purposes of FISMA reporting.
Mitigation: During this limited time of the IATO, the weaknesses will be corrected and the systems retested to verify an acceptable level of risk. The issues are scheduled to be corrected before the end of the fiscal year, thus meeting our annual performance metric and FISMA reporting expectations.

G Schedule FY 2008



G Budget/Funding FY08

Jim LeDuc will fill in the budget quadrant